IN THE CLAIMS:

Please cancel claims 1-33 without prejudice, and please add the following claims:

34.   A method in a data processing system having a first program containing code and having a second program, the method comprising the steps of:

providing a first abstract computing machine to the data processing system;

providing a second abstract computing machine to the data processing system;

running the first program on the first abstract computing machine;

running the second program on the second abstract computing machine;

sending a portion of the code from the first program to the second program; and

running the portion of the code by the second program on the second abstract computing machine.

35.   The method of claim 34 wherein the sending step includes the step of:

sending an object containing the portion of the code to the second program.

36.   The method of claim 34 wherein the sending step includes the step of:

sending data to the second program.

37.   The method of claim 34, wherein the portion of the code is part of an object, wherein the second program has a function, and wherein the sending step includes the step of:

invoking the function by the first program, and passing the object as a parameter to the function.

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38.   The method of claim 34, wherein the portion of the code is part of an object, wherein the first program has a function, wherein the step of running the second program includes the step of:

invoking the function by the second program, and wherein the sending step includes the step of:

returning to the second program the object as a result of the invocation of the function.

39.   The method of claim 34, wherein the first abstract computing machine is contained in a first computer system with a first processor, wherein the second abstract computing machine is contained in a second computer system with a second processor, wherein the second program has second code, and wherein the step of running the first program includes the steps of:

receiving the first code by the first abstract computing machine;

converting the first code into a format suitable to the first processor by the first abstract computing machine; and

executing the first code in the format suitable to the first processor on the first processor, and wherein the step of running the second program includes the steps of:

receiving the second code by the second abstract computing machine;

converting the second code into a format suitable to the second processor by the second abstract computing machine; and

executing the second code in the format suitable to the second processor on the second processor.

40.   The method of claim 34 wherein the data processing system includes a first computer system and a second computer system, wherein the step of providing a first abstract computing machine includes the step of:

providing the first abstract computing machine to the first computer system, and wherein the step of providing a second abstract computer machine includes the step of:

providing the second abstract computing machine to the second computer system.

41.   The method of claim 34 wherein the step of running the portion of the code includes the step of:

running the portion of the code by the second program on the second abstract computing machine in a same manner as the portion of the code is run on the first abstract computing machine.

42.   A method in a data processing system having a first abstract computing machine and having a second abstract computing machine, the method comprising the steps of:

running a first program on the first abstract computing machine;

receiving code by the first program, the code originating from a second program running on the second abstract computing machine; and

running the code on the first abstract computing machine by the first program.

43. A method in a data processing system having a first abstract computing machine and having a second abstract computing machine, the method comprising the steps of:

running a first program with code on the first abstract computing machine; and

sending a portion of the code from the first program to a second program running on the second abstract computing machine such that the portion of the code is received by the second program and run on the second abstract computing machine by the second program.

44. A method in a data processing system having a first computer and a second computer, the method comprising the steps of:

providing a first virtual machine to the first computer;

initiating execution of a first program on the first virtual machine such that the first virtual machine interprets the first program, the first program having an object with code;

providing a second virtual machine to the second computer, the second computer being heterogeneous with respect to the first computer;

initiating execution of a second program with a function on the second virtual machine such that the second virtual machine interprets the second program;

invoking by the first program the function of the second program using a remote procedure call mechanism, and passing the object as an argument to the function invocation; and

executing the function responsive to the invocation such that the code of the object is executed on the second virtual machine in a same manner as the code is executed on the first virtual machine.

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45. The method of claim 44, further including the steps of:

returning a second object to the first program by the function responsive to the execution of the function, the second object containing second code; and

running the second code by the first program on the first virtual machine in a same manner as the second code is run on the second virtual machine.

46. A data processing system comprising:

a first computer, containing:

a first memory, further including:

a first program having first code, the first program for sending a portion of the first code to a remote location; and

a first abstract computing machine for interpreting the first code of the first program by receiving the first code in an input format and by converting the first code to a first output format; and

a first processor for running the first abstract computing machine and for running the first code in the first output format; and

a second computer, containing:

a second memory, further including:

a second program with second code, the second program for receiving the portion of the first code from the first program and for causing interpretation of the portion of the first code; and

a second abstract computing machine for interpreting both the second code and the portion of the first code by receiving the second code and the portion of the first code in the input format and by converting the second code and the portion of the first code into a second output format different than the first output format; and

a second processor for running the second abstract computing machine and for running the second code and the portion of the first code in the second output format.

47.   The data processing system of claim 46 wherein the first abstract computing machine and the second abstract computing machine are virtual machines.

48.   The data processing system of claim 46 wherein the second program has a function and wherein the portion of the first code is sent to the second program as a parameter during invocation of the function.

49.   The data processing system of claim 46 wherein the first program has a function that is invoked by the second program and wherein the portion of the first code is sent to the second program as a result of the function invocation.

50.   The data processing system of claim 46 wherein the portion of the first code is part of an object that is sent to the second program.

51.   The data processing system of claim 50 wherein the object includes data.

LAW OFFICES
FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N.W.
WASHINGTON, DC 20005
202-408-4000

52.   The data processing system of claim 46 wherein the first computer and the second computer are heterogeneous with respect to each other.

53.   A data processing system having a first computer system with a first program containing code and having a second computer system with a second program, comprising:

means for providing a first abstract computing machine to the first computer system;

means for providing a second abstract computing machine to the second computer system;

means for running the first program on the first abstract computing machine;

means for running the second program on the second abstract computing machine;

means for sending a portion of the code from the first program to the second program; and

means for running the portion of the code by the second program on the second abstract computing machine in a same manner as the code is run on the first abstract computing machine.

54.   A computer-readable medium containing instructions for controlling a data processing system to perform a method, the data processing system having a first program containing code and having a second program, the method comprising the steps of:

providing a first abstract computing machine to the data processing system;

providing a second abstract computing machine to the data processing system;

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running the first program on the first abstract computing machine;

running the second program on the second abstract computing machine;

sending a portion of the code from the first program to the second program; and

running the portion of the code by the second program on the second abstract computing machine.

55.   The computer-readable medium of claim 54 wherein the sending step includes the step of:

sending an object containing the code to the second program.

56.   The computer-readable medium of claim 54 wherein the sending step includes the step of:

sending data to the second program.

57.   The computer-readable medium of claim 54 wherein the portion of the code is part of an object, wherein the second program has a function, and wherein the sending step includes the step of:

invoking the function by the first program, and passing the object as a parameter to the function.

58. The computer-readable medium of claim 54 wherein the portion of the code is part of an object, wherein the first program has a function, wherein the step of running the second program includes the step of:

invoking the function by the second program, and wherein the sending step includes the step of:

returning to the second program the object as a result of the invocation of the function.

59. The computer-readable medium of claim 54 wherein the first abstract computing machine is contained in a first computer system with a first processor, wherein the second abstract computing machine is contained in a second computer system with a second processor, wherein the second program has second code, and wherein the step of running the first program includes the steps of:

receiving the first code by the first abstract computing machine;

converting the first code into a format suitable to the first processor by the first abstract computing machine; and

executing the first code in the format suitable to the first processor on the first processor, and wherein the step of running the second program includes the steps of:

receiving the second code by the second abstract computing machine;

converting the second code into a format suitable to the second processor by the second abstract computing machine; and

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executing the second code in the format suitable to the second processor on the second processor.

60.   The computer-readable medium of claim 54 wherein the data processing system includes a first computer system and a second computer system, wherein the step of providing a first abstract computing machine includes the step of:

providing the first abstract computing machine to the first computer system, and where the step of providing a second abstract computer machine includes the step of:

providing the second abstract computing machine to the second computer system.

61.   The computer-readable medium of claim 54 wherein the step of running the portion of the code includes the step of:

running the portion of the code by the second program on the second abstract computing machine in a same manner as the portion of the code is run on the first abstract computing machine.

62.   A computer-readable medium containing instructions for controlling a data processing system to perform a method, the data processing system having a first abstract computing machine and having a second abstract computing machine, the method comprising the steps of:

running a first program on the first abstract computing machine;